

Notice of Allowability

Application No.

10/748,544

Examiner

Juan A. Torres

Applicant(s)

ZEIRA, ARIELA

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment - After Non-Final Rejection filed on 09/10/2007.
2. ☒ The allowed claim(s) is/are 1-64.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Drawings

The modifications to the drawings were received on 09/10/2007. These modifications are accepted by the Examiner.

In view of the amendment filed on 09/10/2007, the Examiner withdraws drawings objections of the previous Office action.

Specification

The modifications to the specification were received on 09/10/2007. These modifications are accepted by the Examiner.

In view of the amendment filed on 09/10/2007, the Examiner withdraws specification objections of the previous Office action.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with C. Frederick Koenig, III on 09/17/2007.

The application has been amended as follows:

a) in line 2 of claim 3 the recitation "two times (an impulse response length less than one chip)"; is changed to "two chips less than twice an impulse response length"

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b) in line 2 of claim 9 the recitation "two times (an impulse response length less than one chip)"; is changed to "two chips less than twice an impulse response length"

c) in lines 3-4 of claim 15 the recitation "two times (an impulse response length less than one chip)"; is changed to "two chips less than twice an impulse response length"

d) in lines 3-4 of claim 21 the recitation "two times (an impulse response length less than one chip)"; is changed to "two chips less than twice an impulse response length"

e) in lines 3-4 of claim 27 the recitation "two times (an impulse response length less than one chip)"; is changed to "two chips less than twice an impulse response length"

f) in lines 3-4 of claim 33 the recitation "two times (an impulse response length less than one chip)"; is changed to "two chips less than twice an impulse response length"

g) in lines 3-4 of claim 39 the recitation "two times (an impulse response length less than one chip)"; is changed to "two chips less than twice an impulse response length"

h) in lines 3-4 of claim 45 the recitation "two times (an impulse response length less than one chip)"; is changed to "two chips less than twice an impulse response length"

j) in lines 3-4 of claim 51 the recitation "two times (an impulse response length less than one chip)"; is changed to "two chips less than twice an impulse response length"

k) in lines 3-4 of claim 57 the recitation "two times (an impulse response length less than one chip)"; is changed to "two chips less than twice an impulse response length"

Allowable Subject Matter

Claims 1-64 are allowed.

The following is an examiner's statement of reasons for allowance: Claims 1-64 are allowed because a comprehensive search of prior art failed to teach, either alone or in combination, a method for receiving signals in a wireless communication system, the method comprising receiving a plurality of user signals in a shared spectrum, producing samples of the received user signals as a received vector, segmenting the received vector into a plurality of segments, for each segment, successively determining symbols for each user by determining symbols for one user and removing a contribution of that one user from the corresponding segment, and assembling the determined symbols corresponding to each segment into a data vector; a method for receiving signals in a wireless communication system, the method comprising receiving a plurality of signals in a shared spectrum, producing samples of the received signals as a received vector, segmenting the received vector into a plurality of segments; grouping the received signals by received power level, for each segment, successively determining symbols for each group by determining symbols for one group and removing a contribution of

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that one group from the corresponding segment, and assembling the determined symbols corresponding to each segment into a data vector; an antenna configured to receive a plurality of user signals in a shared spectrum, a sampling device configured to produce samples of the received user signals as a received vector, a segmentation device configured to segment the received vector into a plurality of segments, a equalization and successive interference canceller configured to successively determine for each segment symbols for each user by determining symbols for one user and removing a contribution of that one user from the corresponding segment and a segment reassembly device configured to assemble the determined symbols corresponding to each segment into a data vector; an antenna configured to receive a plurality of user signals in a shared spectrum, a sampling device configured to produce samples of the received signals as a received vector, a segmentation device configured to segment the received vector into a plurality of segments, a equalization and successive interference canceller, for each group of received signals having a similar power level, configured to successively determine for each segment symbols for each group by determining symbols for one group and removing a contribution of that one group from the corresponding segment a segment reassembly device configured to assemble the determined symbols corresponding to each segment into a data vector; a segmentation device configured to segment a received vector of a plurality of user signals into a plurality of segments, an equalization and successive interference canceller configured to successively determine for each segment symbols for each user by determining symbols for one user and removing a contribution of that one user from

the respective segment and a segment reassembly device configured to assemble the determined symbols corresponding to each segment into a data vector; and a segmentation device configured to segment a received vector of a plurality of signals into a plurality of segments, an equalization and successive interference canceller, for each group of received signals having a similar power level, configured to successively determine for each segment symbols for each group by determining symbols for one group and removing a contribution of that one group from the respective segment, and a segment reassembly device configured to assemble the determined symbols corresponding to each segment into a data vector, as the applicant has claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is 571-272-3119. The examiner can normally be reached on 8-6 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres
09-14-2007


MOHAMMED GHAYOUR
SUPERVISORY PATENT